

What is claimed is

1. A multilayered article based on polyethylene comprising

(A1) a base layer comprising a polyethylene resin (a1) having a melt flow rate (MFR) according to ASTM D 1238 (190 °C, 2160 g load) in the range from 0.001 to 0.5 g/10 min. and a density in the range from 0.945 to 0.980 g/cm<sup>3</sup>,

(A2) an adhesive layer comprising a modified ethylene/ $\alpha$ -olefin copolymer (a2) which is modified by having grafted thereon an unsaturated carboxylic acid or its derivative and has a density in the range from 0.900 to 0.940 and

(B) a barrier layer comprising an ethylene/vinyl alcohol copolymer (b),

wherein the Izod impact strength (with notch) determined according to ASTM D 256 at minus 40 °C, for a sheet specimen which is prepared by mechanically crushing the laminate into powder, granulating the resulting powder on a monoaxial extruder to form a resin composition and pressing the granular composition on a press molding machine into a sheet of 3 mm thickness at a temperature of 230°C under a pressure of 50 kgf/cm<sup>2</sup> with cooling under the condition defined by ASTM D 1928, is at least 100 J/m.

2. A multilayered article as claimed in Claim 1, wherein the flexural elasticity determined by the method defined in ASTM D 790 for a sheet specimen for bending test cut from the sheet as given in Claim 1 is

greater than 3,000 kgf/cm<sup>2</sup>.

3. A multilayered article as claimed in Claim 1 or 2, wherein it further comprises

(C) a composition layer comprising a resin composition

(c) based on polyethylene, comprising

80 - 99.5 % of an ethylenic polymer (a) and

0.5 - 20 % of the ethylene/vinyl alcohol copolymer (b),

based on the weight of the resin composition,

the resin composition having a melt flow rate (MFR) according to ASTM D 1238 (190 °C, 2160 g load) in the range from 0.001 to 0.5 g/10 min., a density in the range from 0.940 to 0.970 g/cm<sup>3</sup> and an Izod impact strength (with notch), determined according to ASTM D 256 at minus 40°C, of at least 100 J/m

4. A multilayered article as claimed in Claim 1 or 2, wherein the resin composition (c) comprises

99.3 - 50 % of a polyethylene resin (a1) having a melt flow rate (MFR) according to ASTM D 1238 (190°C, 2160 g load) in the range from 0.001 to 0.5 g/10 min. and a density in the range from 0.945 to 0.980 g/cm<sup>3</sup>,

0.2 - 20 % of a modified ethylene/ $\alpha$ -olefin copolymer (a2) which is modified by having grafted thereon an unsaturated carboxylic acid or its derivative and has a density in the range from 0.900 to 0.940 g/cm<sup>3</sup> and

0.5 - 30 % of the ethylene/vinyl alcohol copolymer

(b),

based on the weight of the composition, and has a melt flow rate (MFR) according to ASTM D 1238 (190°C, 2160 g load) in the range from 0.001 to 0.2 g/10 min., a density in the range from 0.940 to 0.970 g/cm<sup>3</sup> and an Izod impact strength (with notch), determined according to ASTM D 256 at minus 40°C, of at least 100 J/m.

5. A multilayered article as claimed in Claims 3 or 4 wherein the resin composition (c) based on polyethylene is a regrind of the multilayered article and/or scraps thereof.

6. A multilayered article as claimed in either one of Claims 3 to 5, wherein the composition layer (C) is interposed between the base layer (A1) and the adhesive layer (A2).

7. A vessel based on polyethylene, which is made of a multilayered article as claimed in either one of Claims 1 to 6.

8. A resin composition (c) based on polyethylene, comprising

99.3 - 50 % of a polyethylene resin (a1) having a melt flow rate (MFR) according to ASTM D 1238 (190°C, 2160 g load) in the range from 0.001 to 0.5 g/10 min. and a density in the range from 0.945 to 0.980 g/cm<sup>3</sup>,

0.2 - 20 % of a modified ethylene/ $\alpha$ -olefin copolymer (a2) which is modified by having grafted thereon an unsaturated carboxylic acid or its derivative and has a density in the range from

0.900 to 0.940 g/cm<sup>3</sup> and

0.5 - 30 % of an ethylene/vinyl alcohol copolymer  
(b),

based on the weight of the composition,  
and having a melt flow rate (MFR) according to ASTM D  
1238 (190 °C, 2160 g load) in the range from 0.001 to  
0.2 g/10 min., a density in the range from 0.940 to  
0.970 g/cm<sup>3</sup> and an Izod impact strength (with notch),  
determined according to ASTM D 256 at minus 40°C, of at  
least 100 J/m.

9. A resin composition (c) based on polyethylene  
as claimed in Claim 8, wherein the proportion of the  
graft-modifying component relative to the entire resin  
composition (c) is 100 - 1,500 ppm.

10. A resin composition based on polyethylene as  
claimed in Claim 8 or 9, which is a regrind of the  
multilayered article and/or scraps thereof.

add  
Bt

Add  
C2